

*CJC*

Docket No. 99SC080US9

PATENT



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No.: 6,710,831 B1

09/474,138

Issued: March 23, 2004

Inventors: Bruce Winker, et al.

Title: HIGH BRIGHTNESS TRANSFLECTIVE LCD AND METHOD USING  
TUNABLE MIRROR

Attn: Certificate of Corrections Branch  
 Commissioner for Patents  
 P.O. Box 1450  
 Alexandria, VA 22313-1450

**Certificate**  
 AUG 12 2004

**of Correction**

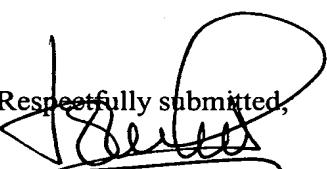
**REQUEST FOR CERTIFICATE OF CORRECTION**  
**TRANSMITTAL**

Sir:

Transmitted herewith is a Request for Certificate of Correction of Patent for PTO Mistake and attachments, along with Certificate of Correction, form PTO/SB/44 (04-04) (two pages).

If any fee is required, charge Deposit Account No. 11-1580. A duplicate of this transmittal is attached.

Respectfully submitted,

  
 Louis A. Mok  
 Registration No. 22,585  
 Attorney for Applicant

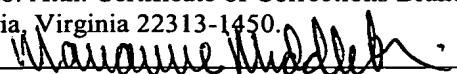
August 4, 2004

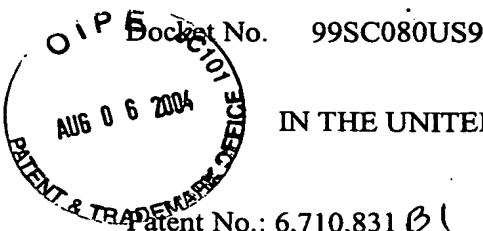
KOPPEL, JACOBS, PATRICK & HEYBL  
 555 St. Charles Drive, Suite 107  
 Thousand Oaks, California, 91360  
 Telephone: (805) 373-0060

## CERTIFICATE OF MAILING

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8/4/04  
 Date

  
 Marianne Middleton



PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No.: 6,710,831 B1

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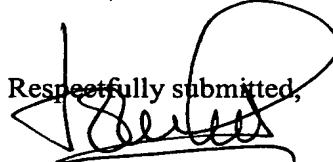
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 Telephone: (805) 373-0060

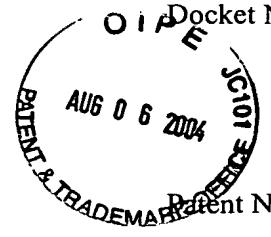
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Date

Marianne Middleton

17 AUG 2004



O I Docket No. 99SC080US9

Express Mailing Label No. EV 380181554 US  
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No.: 6,710,831

Issued: March 23, 2004

Inventors: Bruce Winker, et al.

Title: HIGH BRIGHTNESS TRANSFLECTIVE LCD AND METHOD USING  
TUNABLE MIRROR

Attn: Certificate of Corrections Branch  
Commissioner of Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**REQUEST FOR CERTIFICATE OF CORRECTION  
OF PATENT FOR PTO MISTAKE (37 CFR 1.322(a))**

Dear Sir:

1. Attached is form PT0/SB/44 (04-04) (two pages);
2. Two categories of errors are sought to be corrected:

a. The PTO's failure to include three (3) allowed claims in the patent:

The Notice of Allowability issued October 31, 2003, (copy attached) indicated that nine claims, Nos. 14, 23-26, 30-32 and 39, were allowed. However, only six of these claims (Nos. 14, 23-26 and 39) appear in the issued patent as claims 1-6, respectively. The Certificate of Correction seeks to add to the patent the omitted allowed claims 30-32 as patent claims 7-9, respectively.

b. The PTO's failure to use the formal drawings submitted during prosecution:

The application (S/N 09/676,138) that issued as the subject patent was filed on September 29, 2000, with 18 sheets of informal drawings. On April 30, 2001, applicants filed formal drawings comprising 10 sheets. A true and accurate copy of the return postcard date-stamped April 30, 2001, by the PTO is attached. Also submitted herewith are two true and accurate copies of the formal drawings filed on the aforementioned date. Substitution of these formal drawings for the informal drawings appearing the patent is requested.

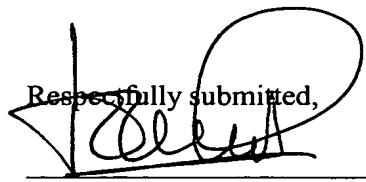
3. Correction of the front page of the subject patent is also requested to correct the number of claims and number of drawing sheets.

4. Please send the certificate to:

Louis A. Mok  
Koppel, Jacobs, Patrick & Heybl  
555 St. Charles Drive, Suite 107  
Thousand Oaks, California 91360

5. If there are any fees due in connection with this request, the Office is authorized to charge the fees to our Deposit Account No. 11-1580.

Dated: Aug. 4, 2004

Respectfully submitted,  
  
\_\_\_\_\_  
Louis A. Mok

Registration No. 22,585  
Attorney for Applicant

KOPPEL, JACOBS, PATRICK & HEYBL  
555 St. Charles Drive, Suite 107  
Thousand Oaks, California, 91360  
Telephone: (805) 373-0060  
M/LI-99SC080US9Request

# UNITED STATES PATENT AND TRADEMARK OFFICE

## CERTIFICATE OF CORRECTION

Page 1 of 2

PATENT NO. : 6,710,831 B1

DATED : March 23, 2004

INVENTOR(S) : Bruce Winker, et al.

**It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:**

**Front Page**

Below "ABSTRACT", "6 Claims, 18 Drawing Sheets" should read --9 Claims, 10 Drawing Sheets--.

**Column 14**

Starting on line 25, add claims 7-9 as follows:

7. A tunable mirror comprising:

a negative quarter-wave to positive quarter-wave (+/-λ/4) retarder, being controllably switchable between -λ/4 and +λ/4 states of operation,

whereby in the +λ/4 state, said retarder circularly polarizes linearly polarized light of a first linear direction to circularly polarized light of a first rotational direction, and linearly polarizes circularly polarized light of the first rotational direction to linearly polarized light of the first linear direction, and, in the -λ/4 state, said retarder linearly polarizes circularly polarized light of a second rotational direction to linearly polarized light of the first linear direction; and

a cholesteric reflector optically aligned with the +/- λ/4 retarder, for reflecting circularly polarized light received from the +/- λ/4 retarder having a polarization of the first rotational direction, back through the +/- λ/4 retarder, and transmitting circularly polarized light of the second rotational direction towards the +/- λ/4 retarder,

such that the tunable mirror reflects linearly polarized light of the first linear direction, received through the +/- λ/4 retarder from a side opposite the cholesteric reflector when the +/- λ/4 retarder is in the +λ/4 state, and transmits circularly polarized light of the second rotational direction received through the cholesteric reflector, on a side opposite the +/- λ/4 retarder when the +/- λ/4 retarder is in the -λ/4 state.

**MAILING ADDRESS OF SENDER:**

Louis A. Mok

Koppel, Jacobs, Patrick & Heybl  
 555 St. Charles Drive, Suite 107  
 Thousand Oaks, California 91360

**PATENT NO.**

6,710,831 B1

No. of additional copies



This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

17 AUG 2004

17 AUG 2004

# UNITED STATES PATENT AND TRADEMARK OFFICE

## CERTIFICATE OF CORRECTION

Page 2 of 2

PATENT NO. : 6,710,831 B1  
 DATED : March 23, 2004  
 INVENTOR(S) : Bruce Winker, et al.

It is certified that error appears in the above-identified patent and that said Letters Patent  
is hereby corrected as shown below:

Continued from page 1.

8. The tunable mirror of claim 7, wherein the cholesteric reflector is a diffuse reflecting cholesteric liquid crystal film.

9. The tunable mirror of claim 8, wherein the  $+/- \lambda/4$  retarder comprises a  $0-\lambda/2$  retarder and a  $\lambda/4$  retarder.

**Drawings**

Substitute the attached 10 sheets of formal drawings for the 18 sheets of informal drawings.

**MAILING ADDRESS OF SENDER:**

Louis A. Mok  
 Koppel, Jacobs, Patrick & Heybl  
 555 St. Charles Drive, Suite 107  
 Thousand Oaks, California 91360

**PATENT NO.**

6,710,831 B1

No. of additional copies



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If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

17 AUG 2004.

O I P E  
Notice of Allowability

AUG 06 2004  
USPTO-101

Notice of Allowability	Application No.	Applicant(s)
	09/676,138	WINKER ET AL.
	Examiner James A. Dudek	Art Unit 2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--  
All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTO-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1.  This communication is responsive to the amendment filed 9/17/03.
  2.  The allowed claim(s) is/are 14, 23-26, 30-32, and 39.
  3.  The drawings filed on 29 September 2000 are accepted by the Examiner.
  4.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a)  All b)  Some\* c)  None of the:
      1.  Certified copies of the priority documents have been received.
      2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
      3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_\_.
5.  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
    - (a)  The translation of the foreign language provisional application has been received.
  6.  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

7.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8.  CORRECTED DRAWINGS must be submitted.
  - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1)  hereto or 2)  to Paper No. \_\_\_\_\_.
  - (b)  including changes required by the proposed drawing correction filed \_\_\_\_\_, which has been approved by the Examiner.
  - (c)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet.

9.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

#### Attachment(s)

- |  |  |
|--|--|
| <input type="checkbox"/> Notice of References Cited (PTO-892)  | <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                    | <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____.   |
| <input type="checkbox"/> Information Disclosure Statements (PTO-1449), Paper No. _____.              | <input type="checkbox"/> Examiner's Amendment/Comment                    |
| <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | <input type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|  | <input type="checkbox"/> Other   |



James A. Dudek  
Primary Examiner  
Art Unit: 2871

Serial 09/676,138 Docket No. 99SC080US9

Client. ROCKWELL SCIENCE CENTER

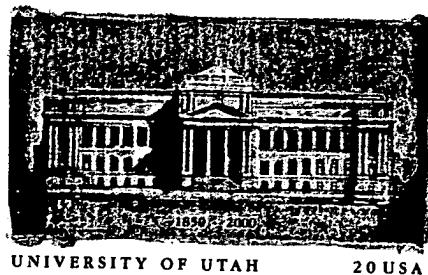
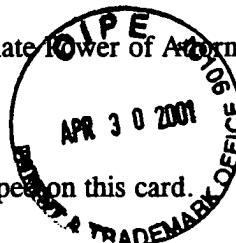
Applicant. WINKER et al.

Title HIGH BRIGHTNESS TRANSFLECTIVE LCD AND METHOD  
USING TUNABLE MIRROR

On 4-30-01, we mailed:

1. Transmittal of Formal Drawings and Associate Power of Attorney
2. 10 Formal Drawings with two copies.
3. Associate Power of Attorney

The PTO received the above on the date stamped on this card.



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KOPPEL & JACOBS

KOPPEL & JACOBS  
555 ST. CHARLES DRIVE  
SUITE 107  
THOUSAND OAKS, CALIFORNIA 91360

3136012654



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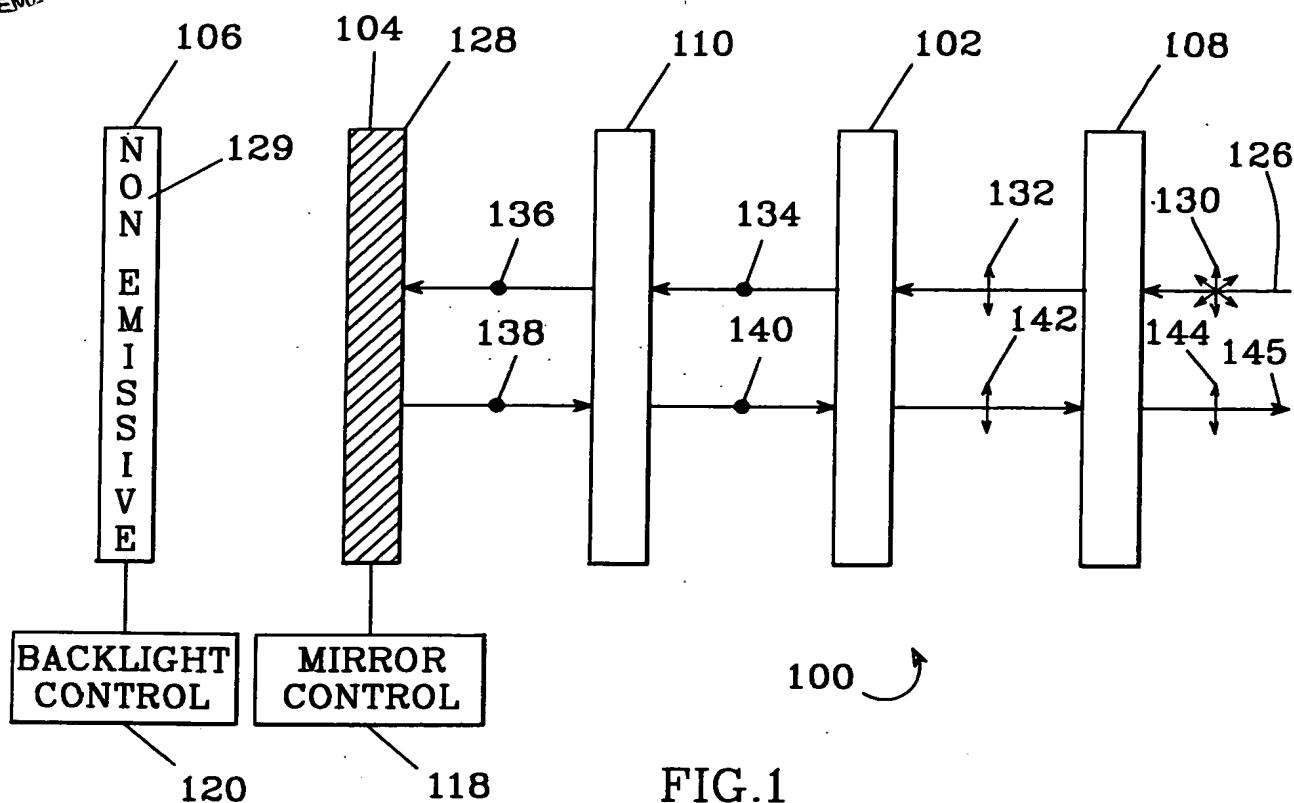


FIG.1

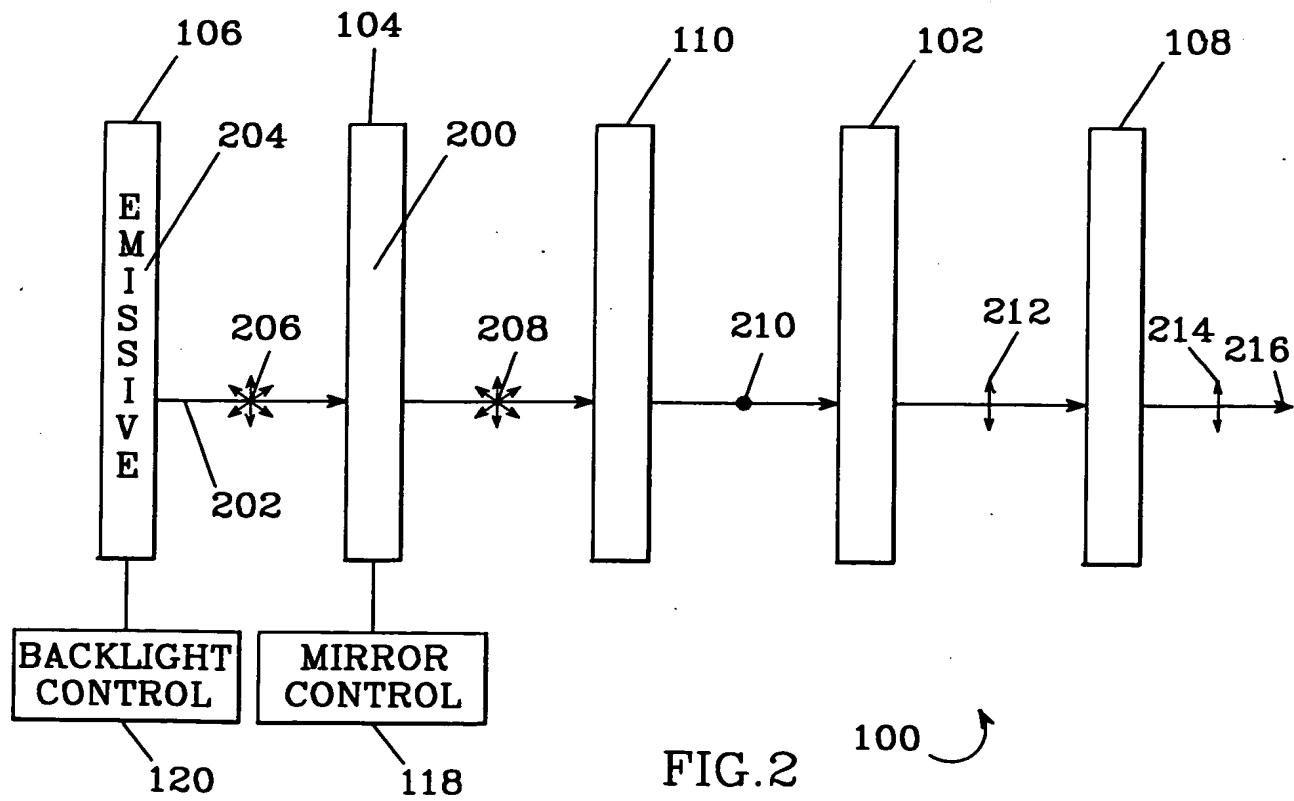


FIG.2



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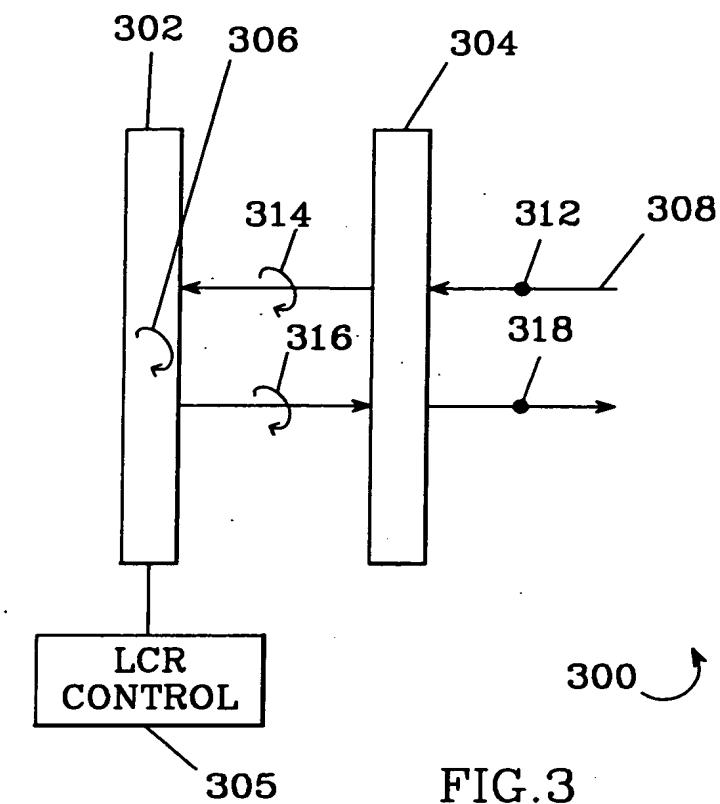


FIG. 3

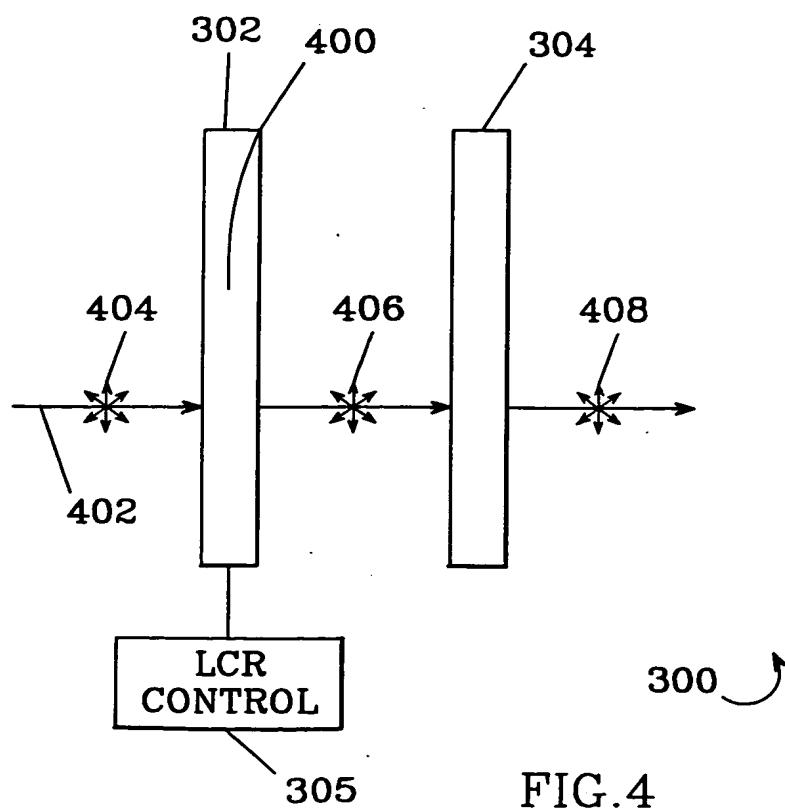


FIG. 4

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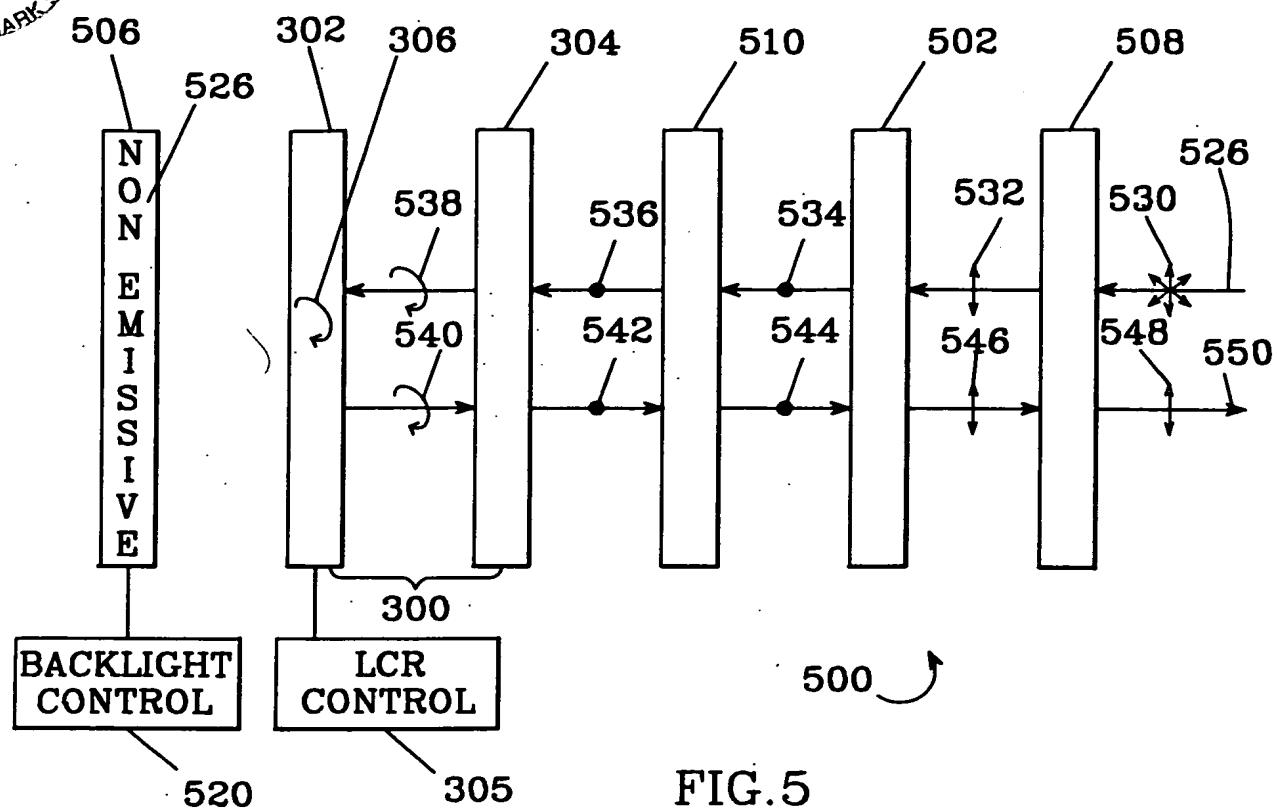


FIG.5

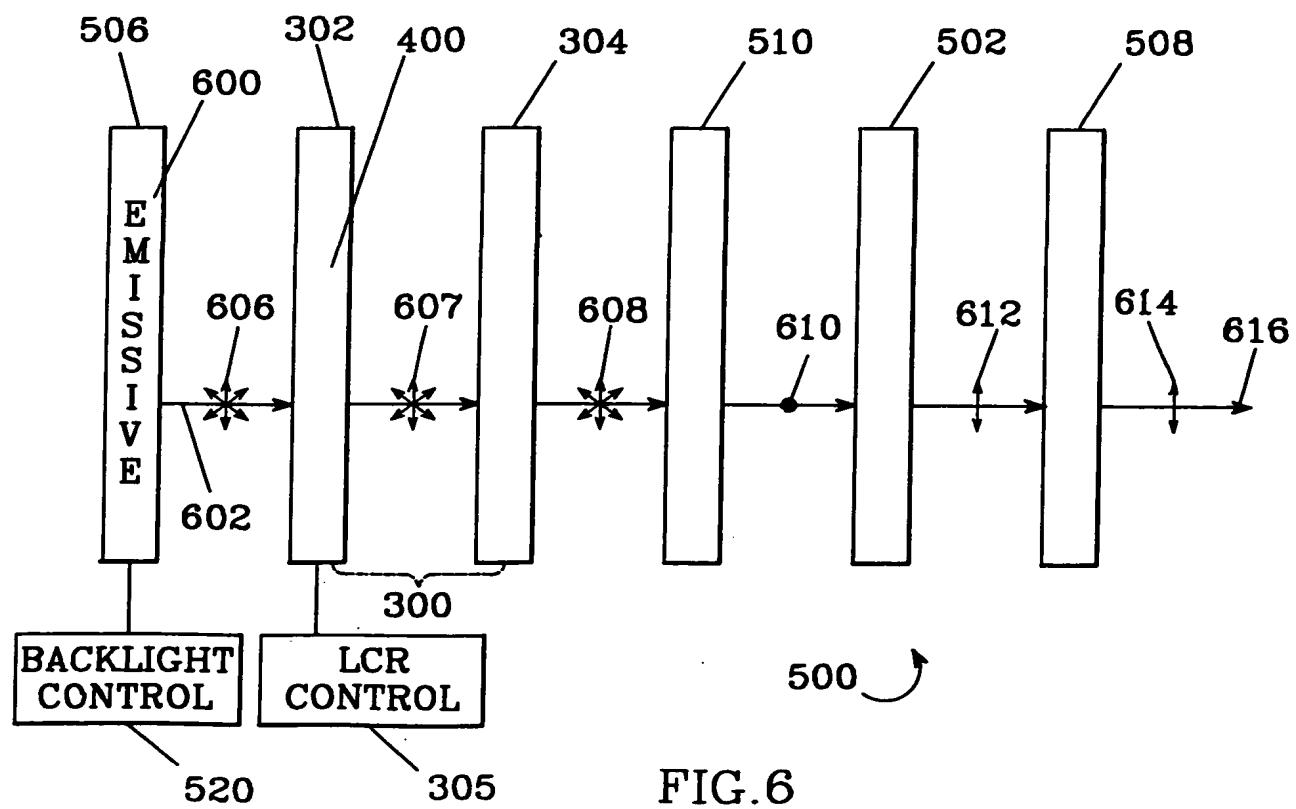


FIG.6



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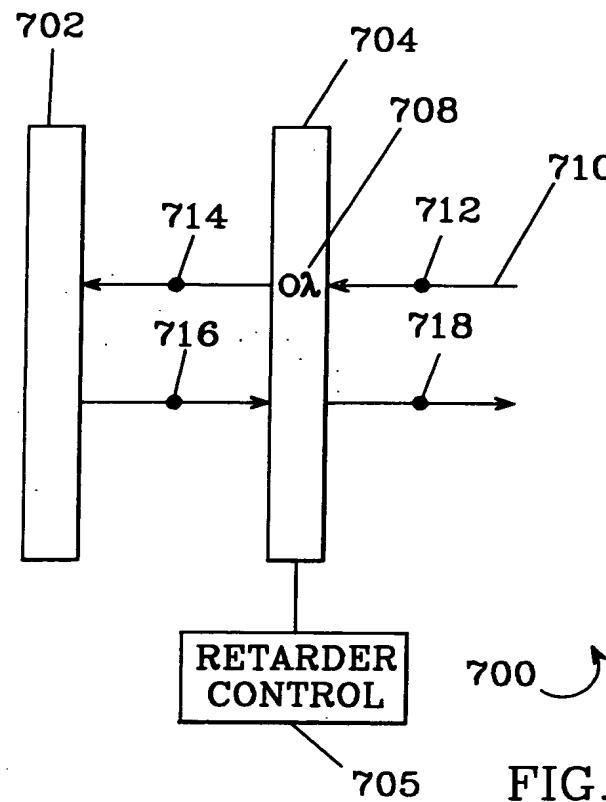


FIG. 7

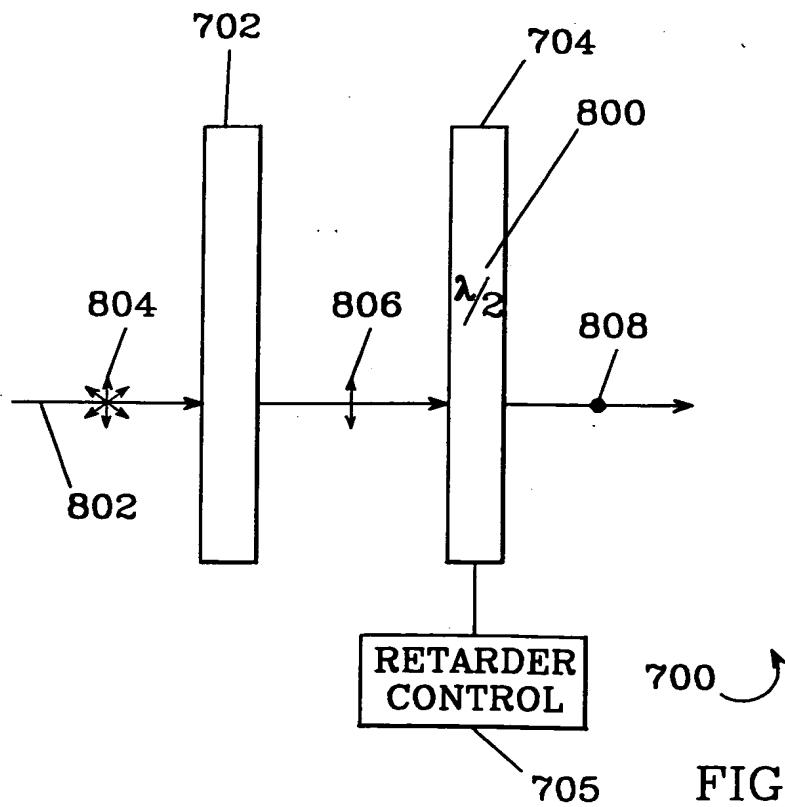
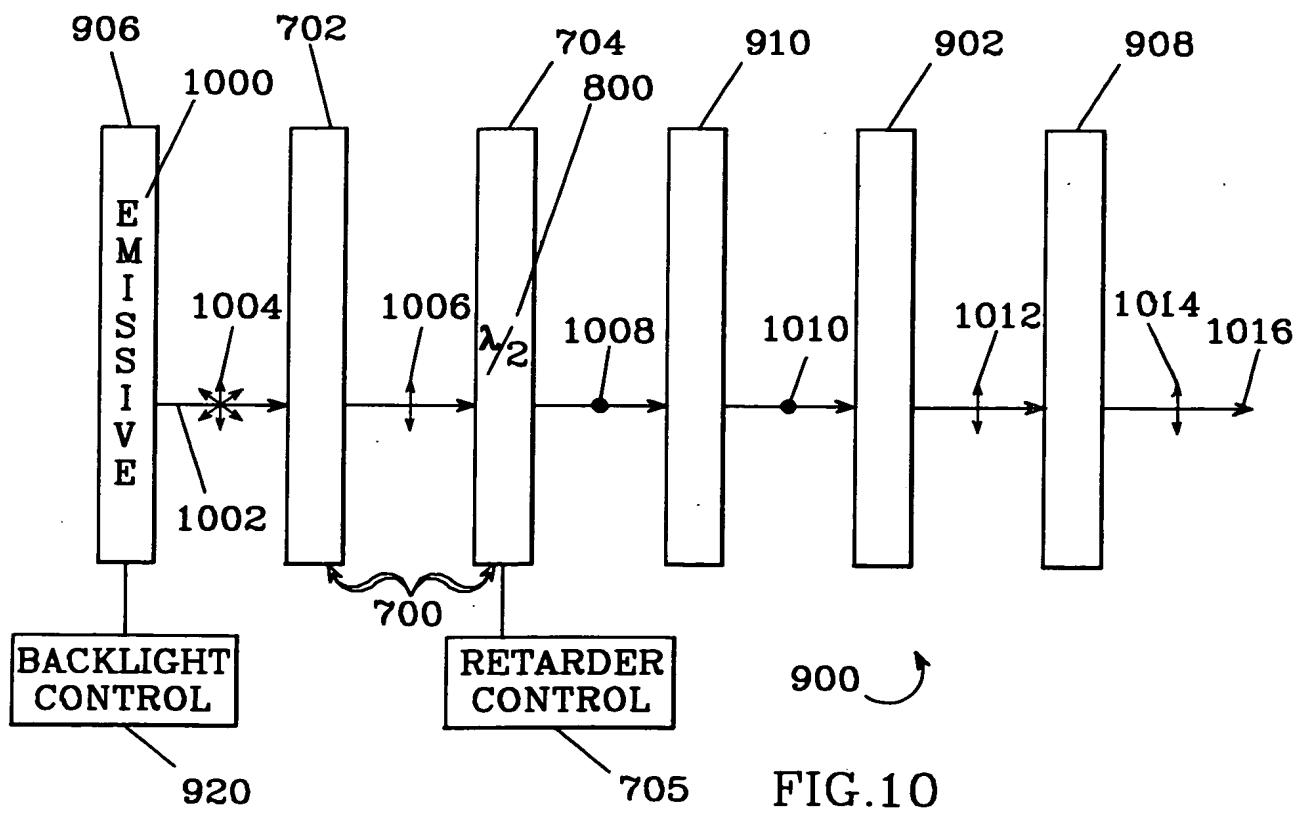
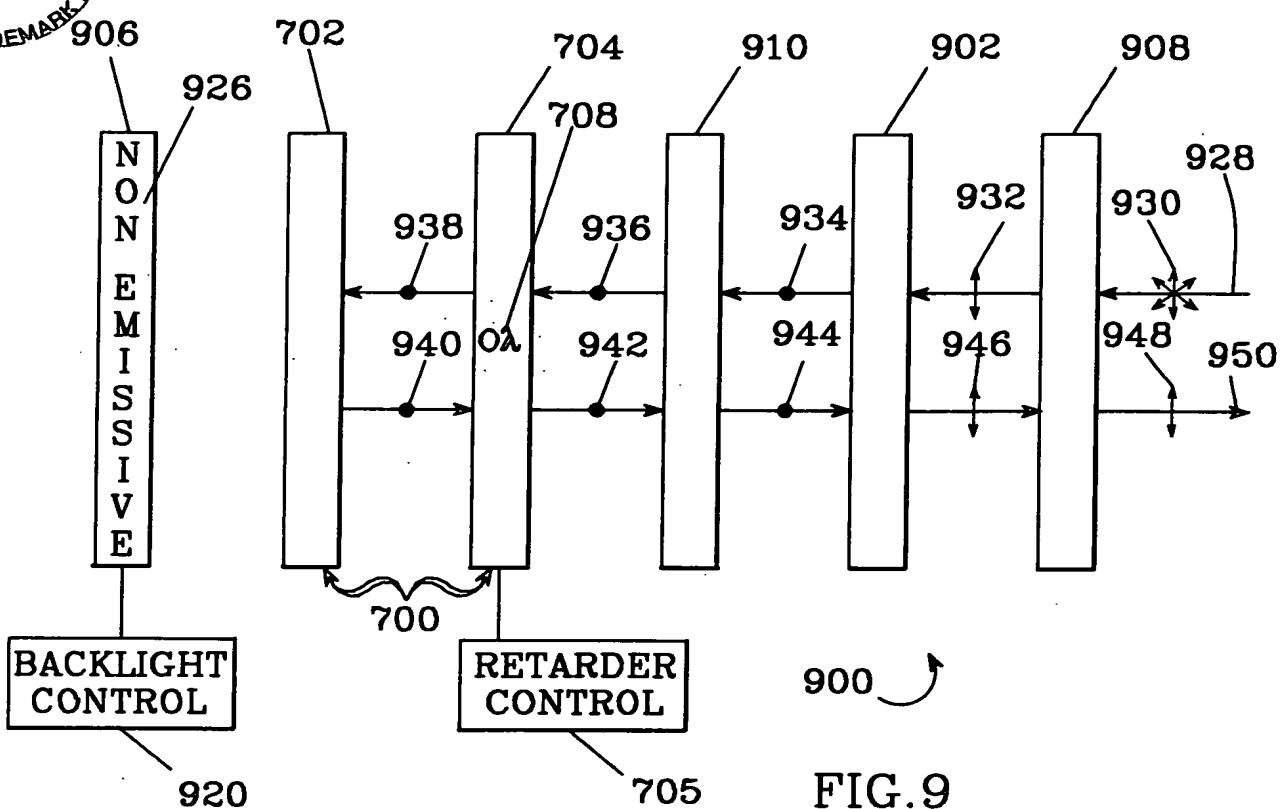


FIG. 8

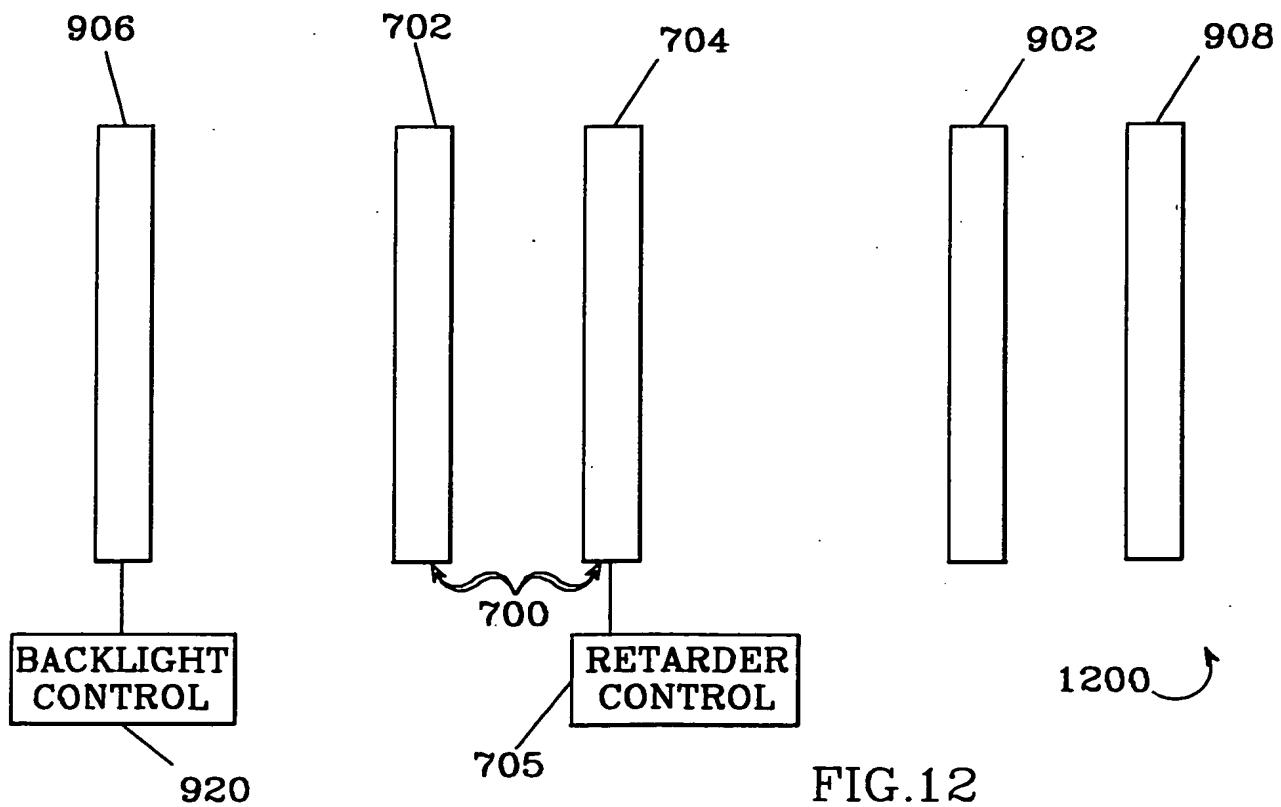
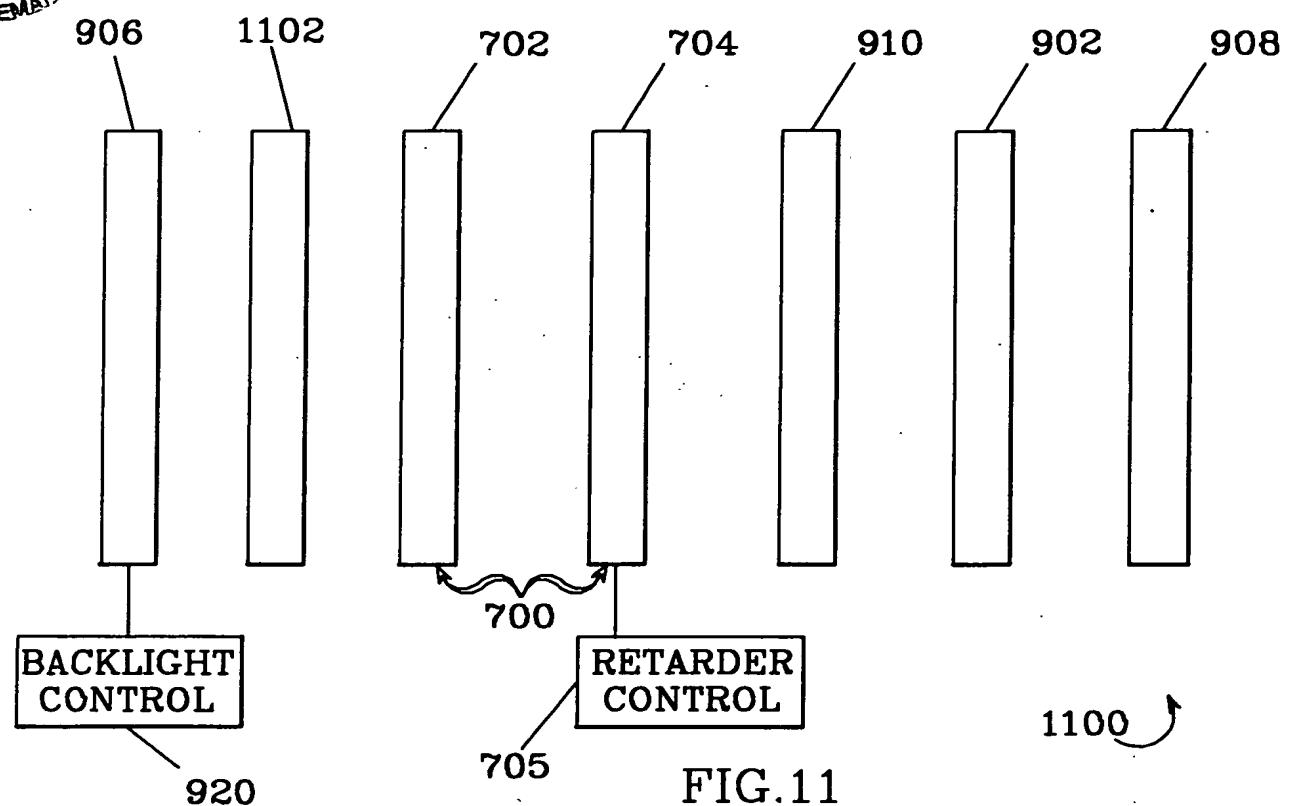
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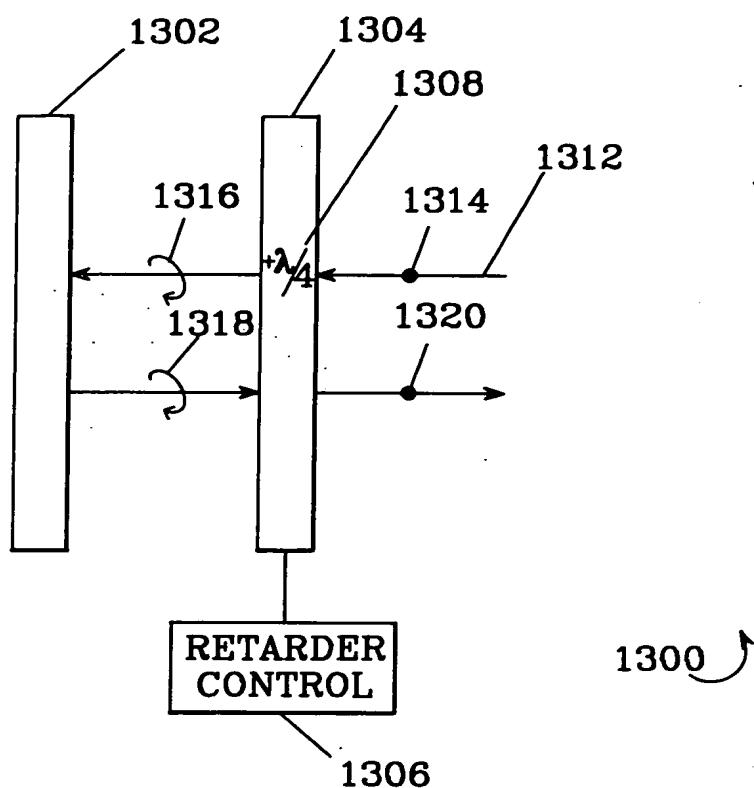


FIG.13

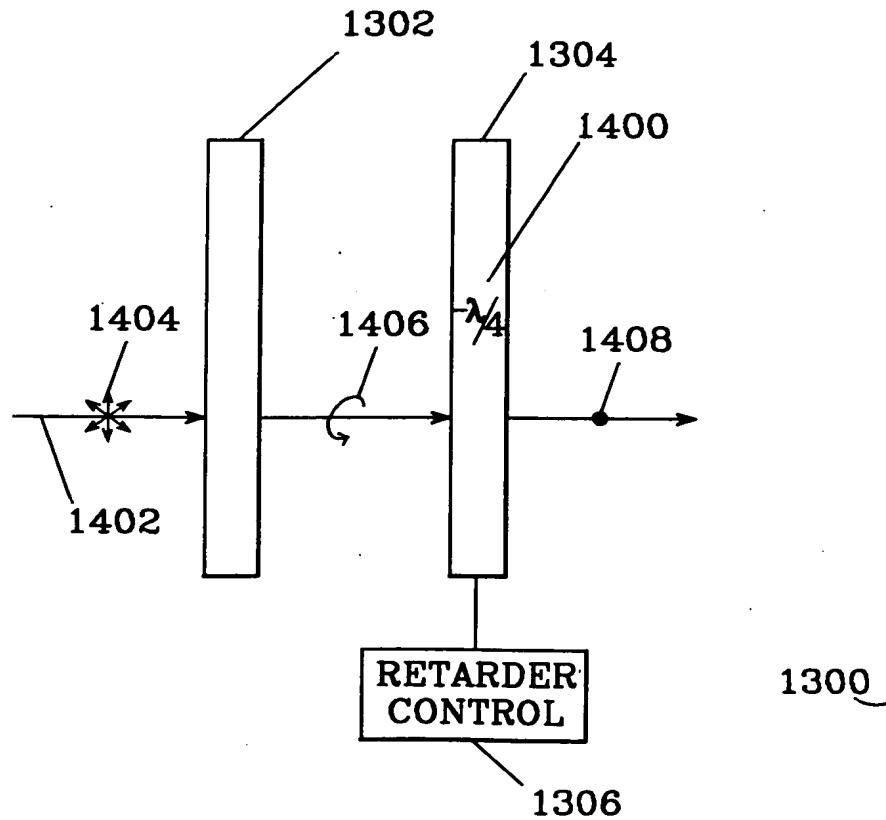


FIG.14

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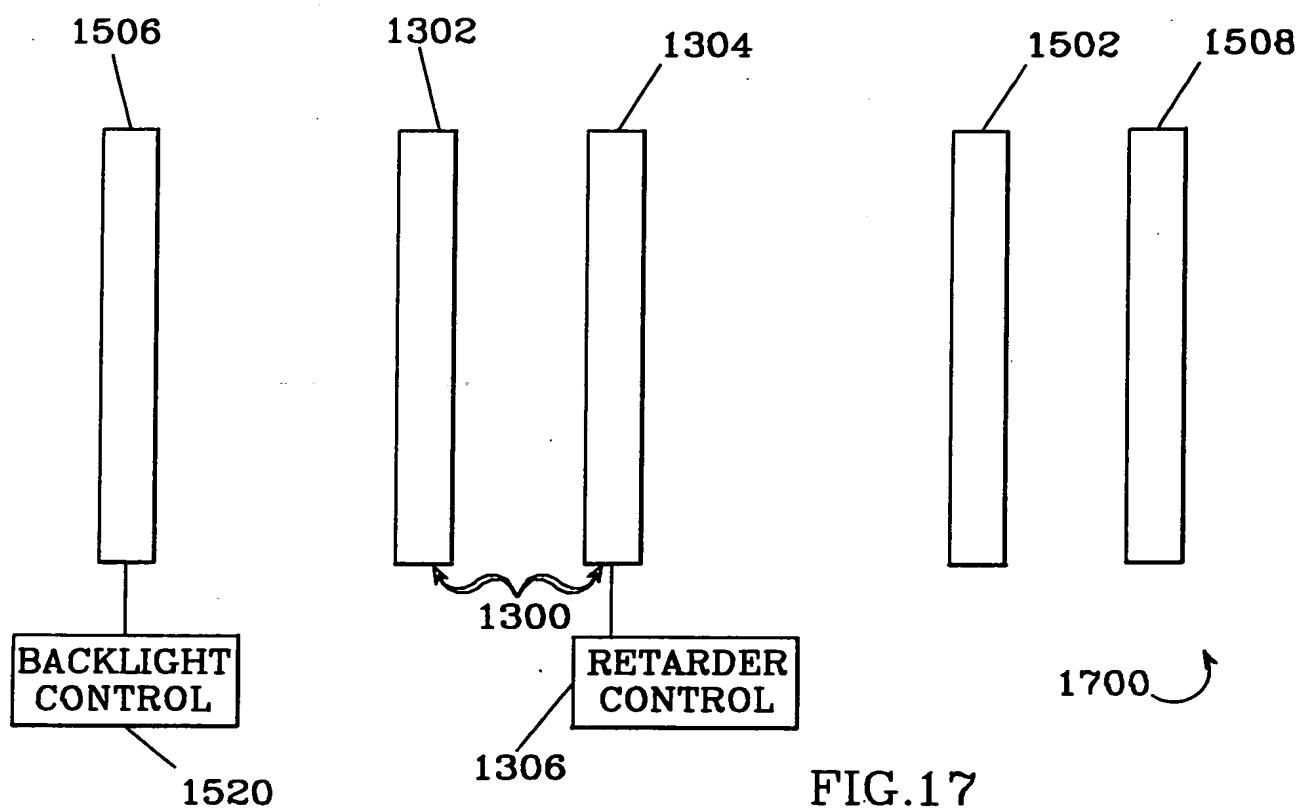


FIG.17



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FIG.18a

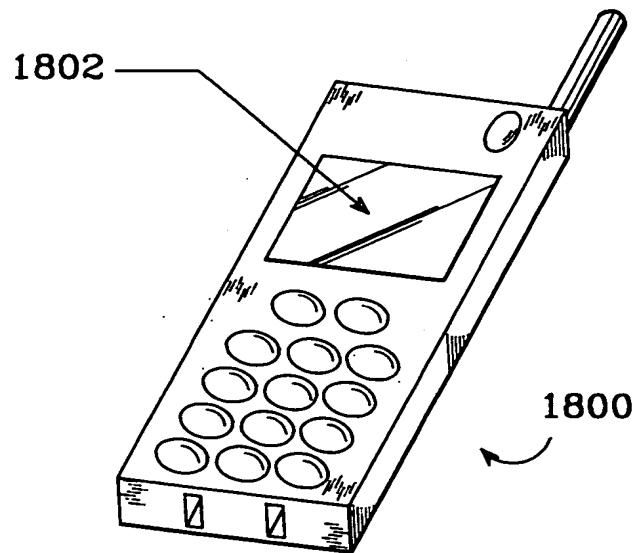


FIG.18b

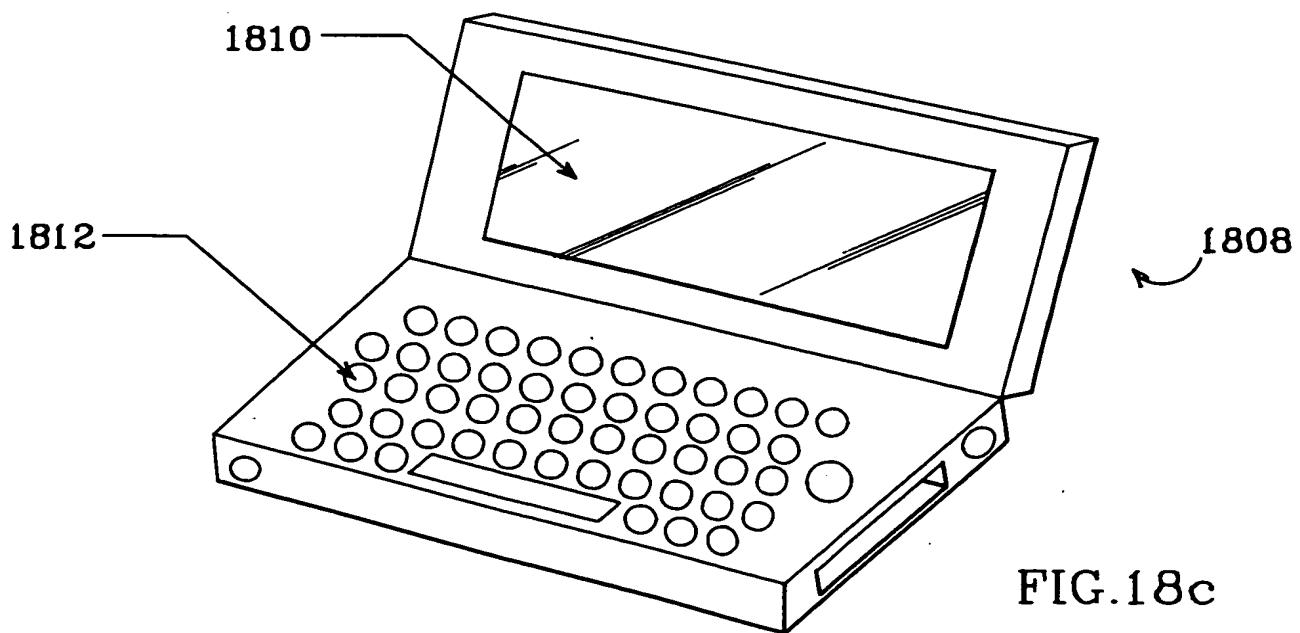
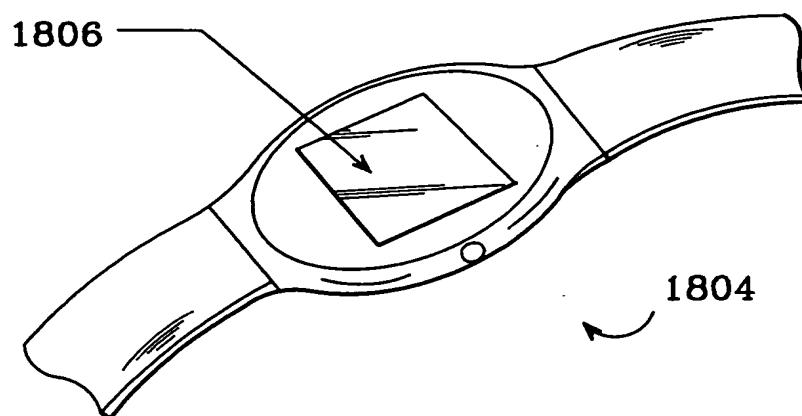


FIG.18c

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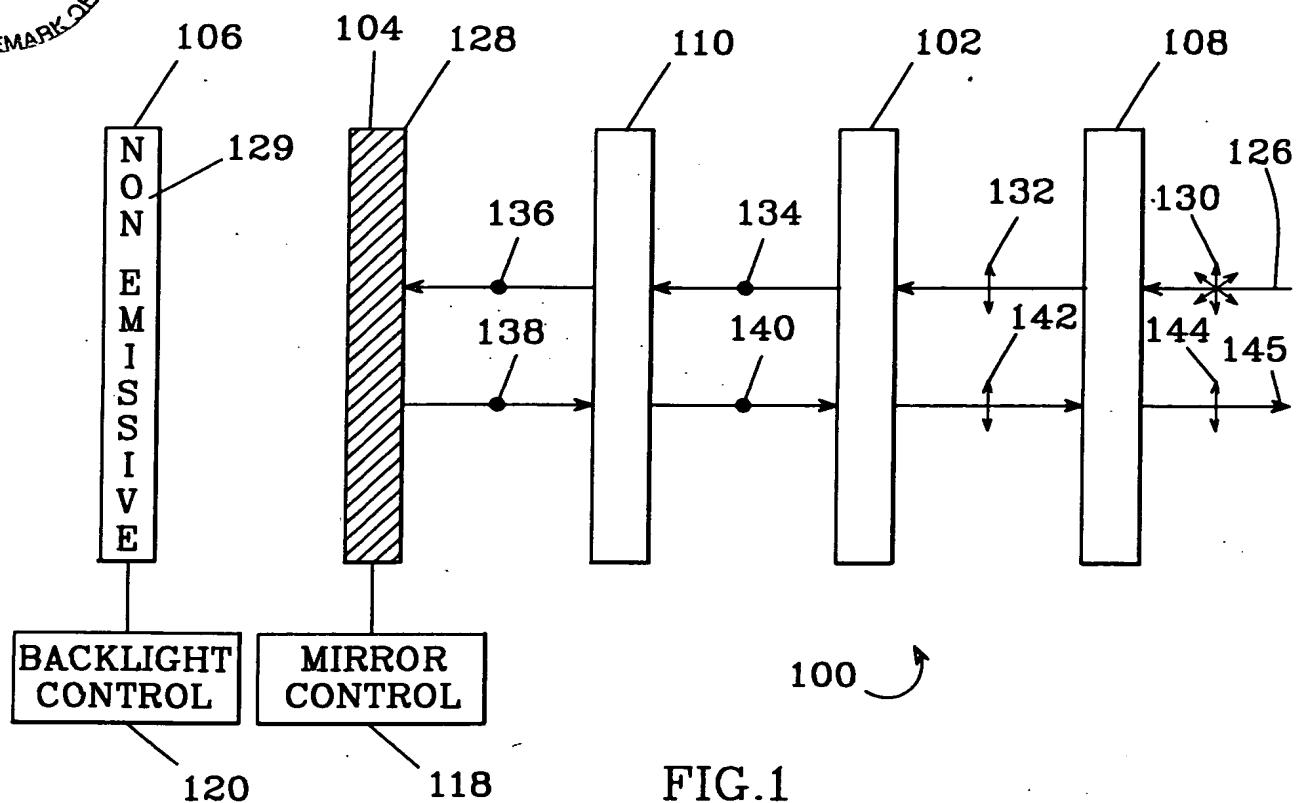


FIG.1

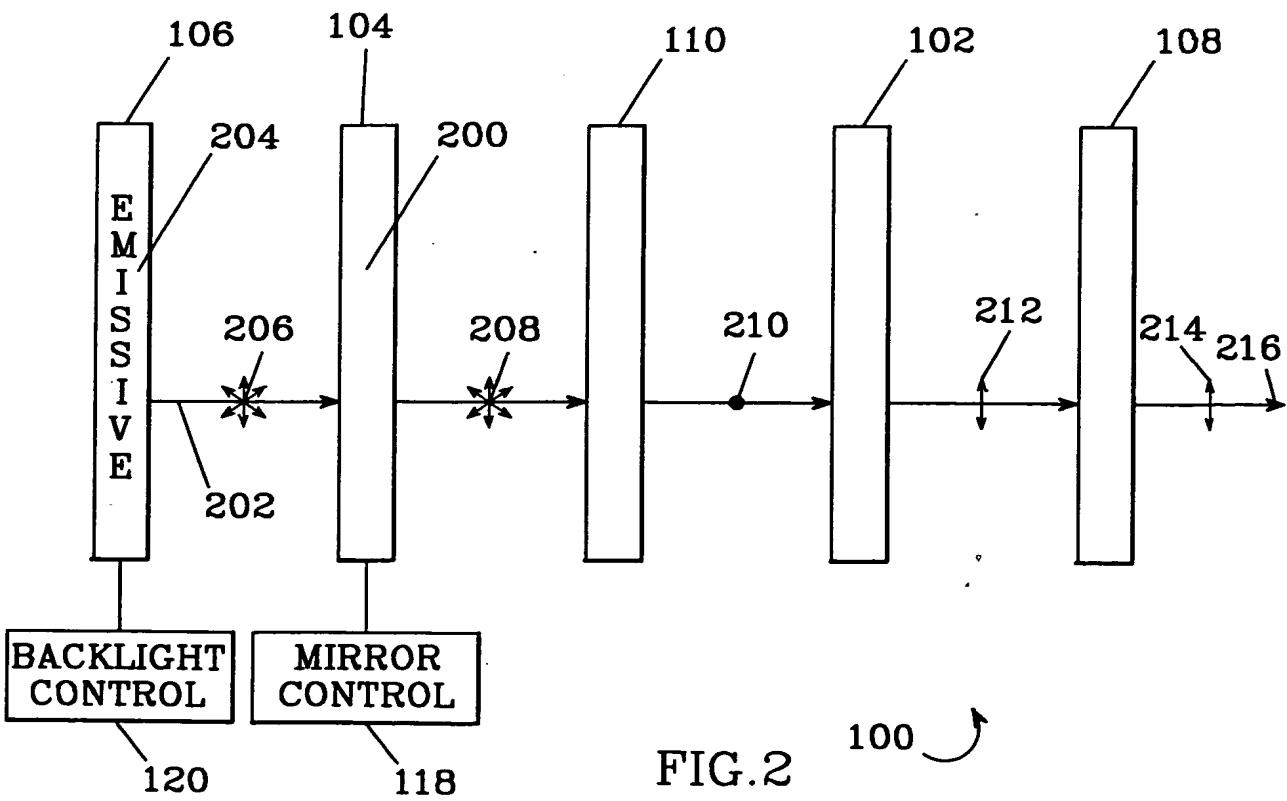


FIG.2

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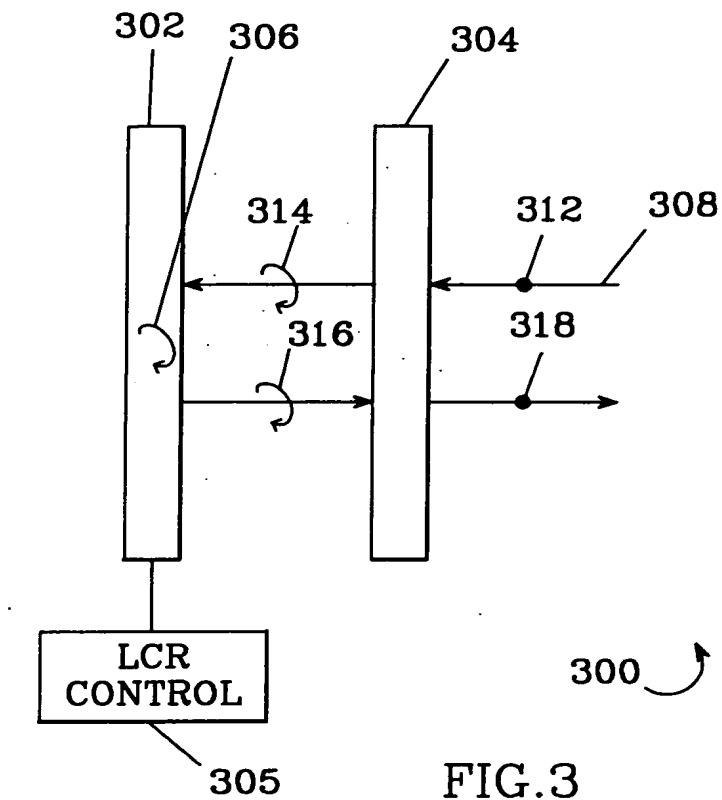


FIG.3

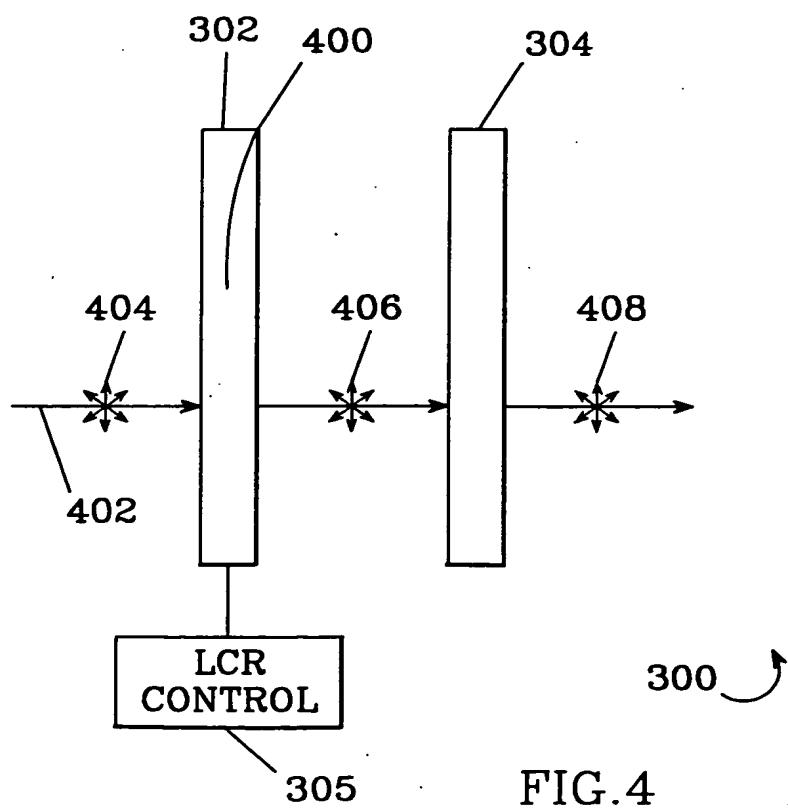


FIG.4



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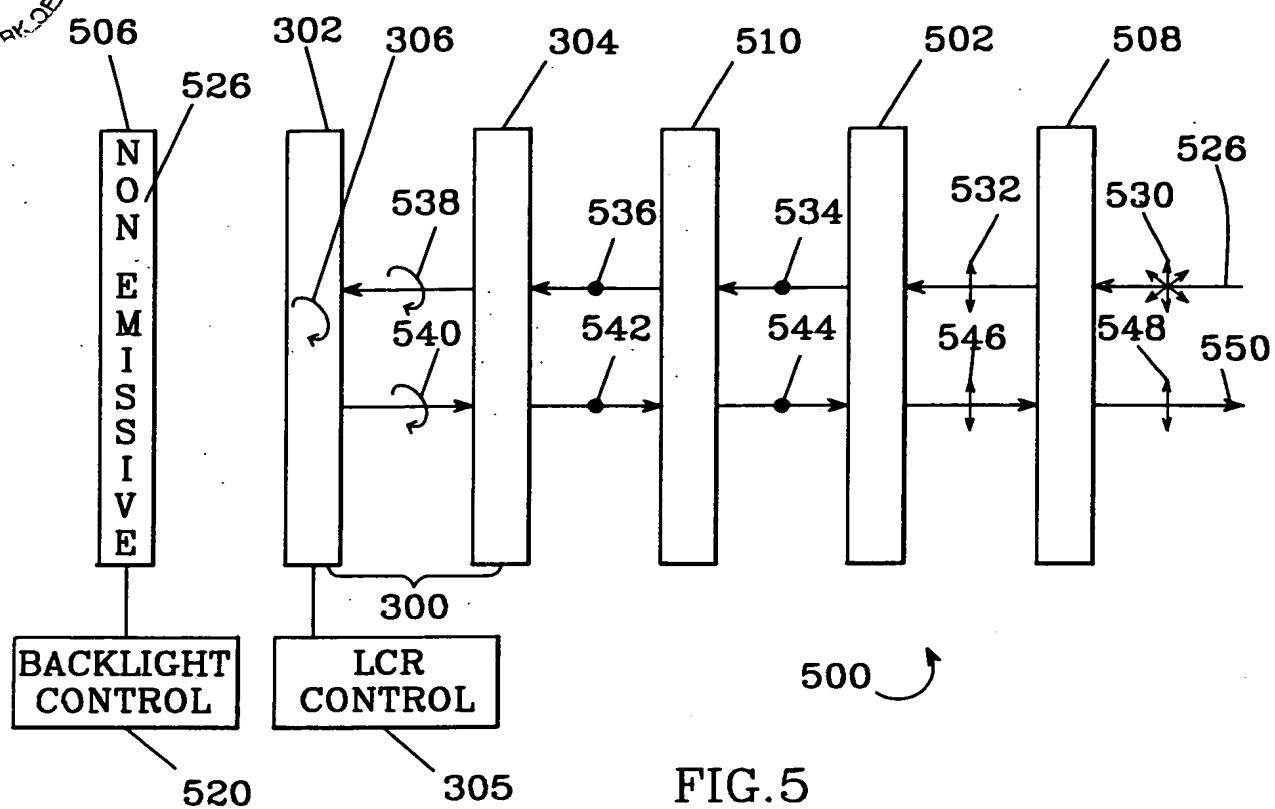


FIG.5

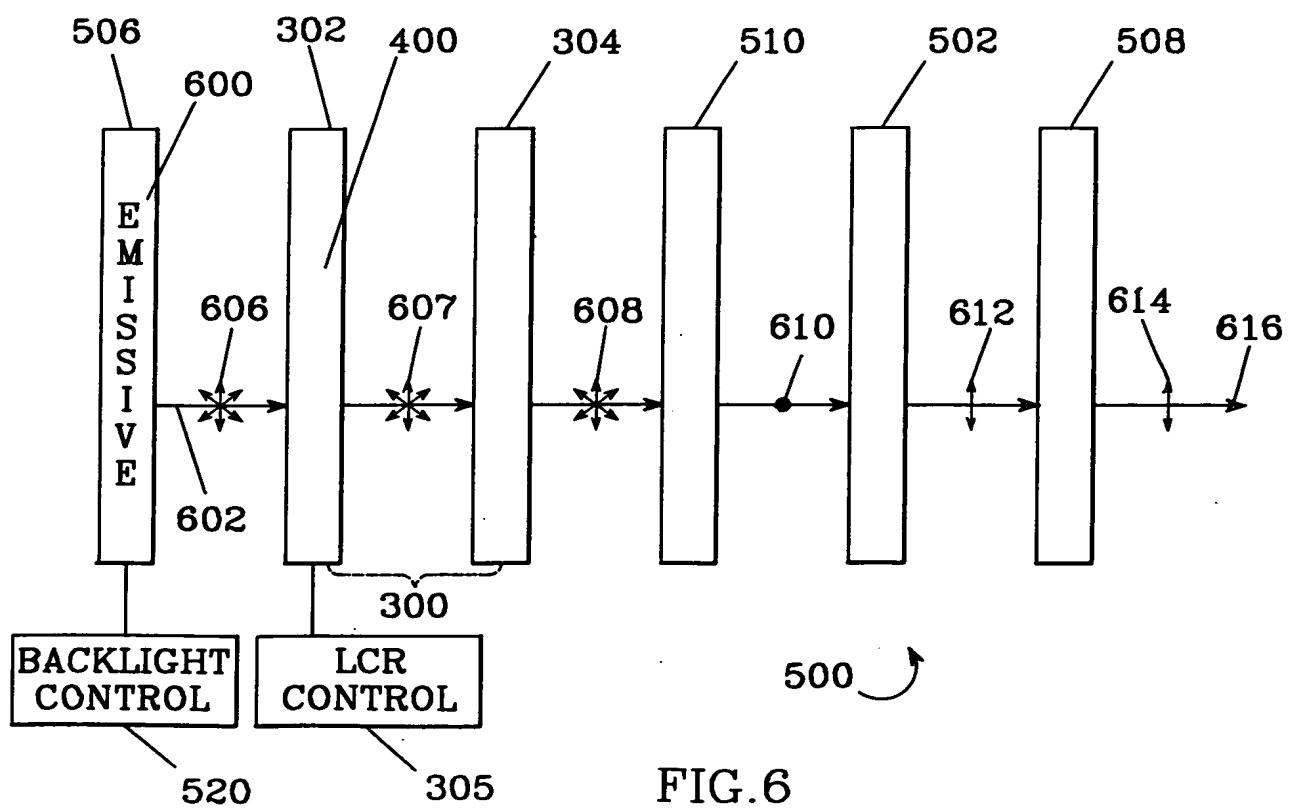


FIG.6



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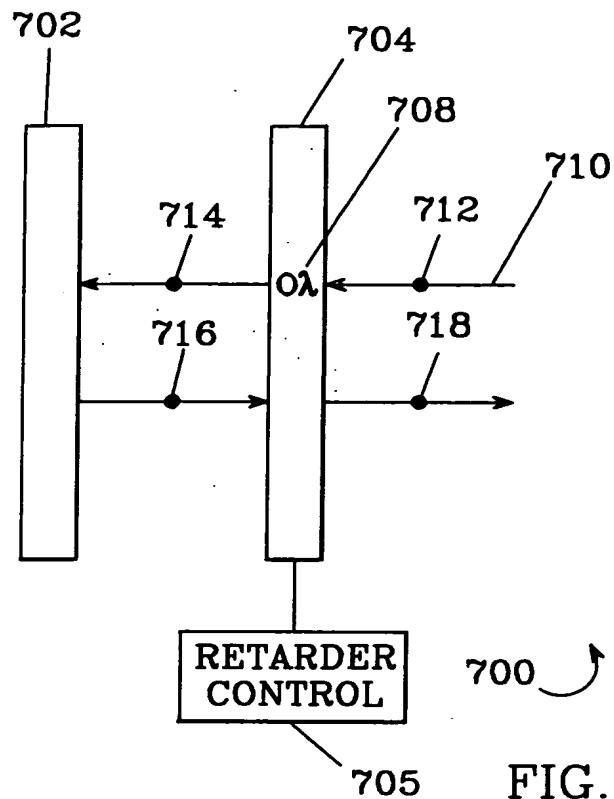


FIG. 7

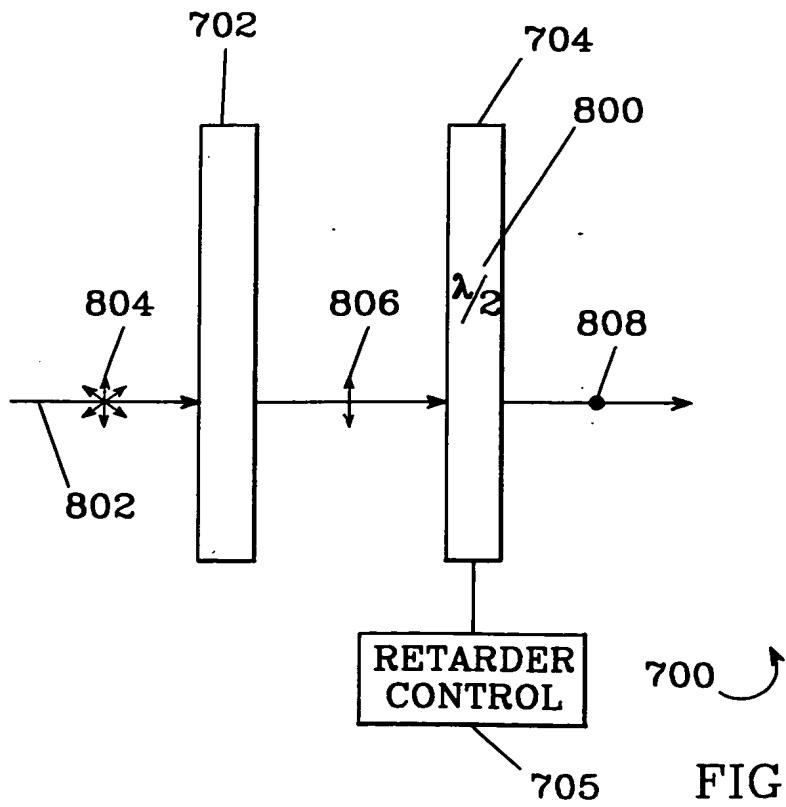


FIG. 8

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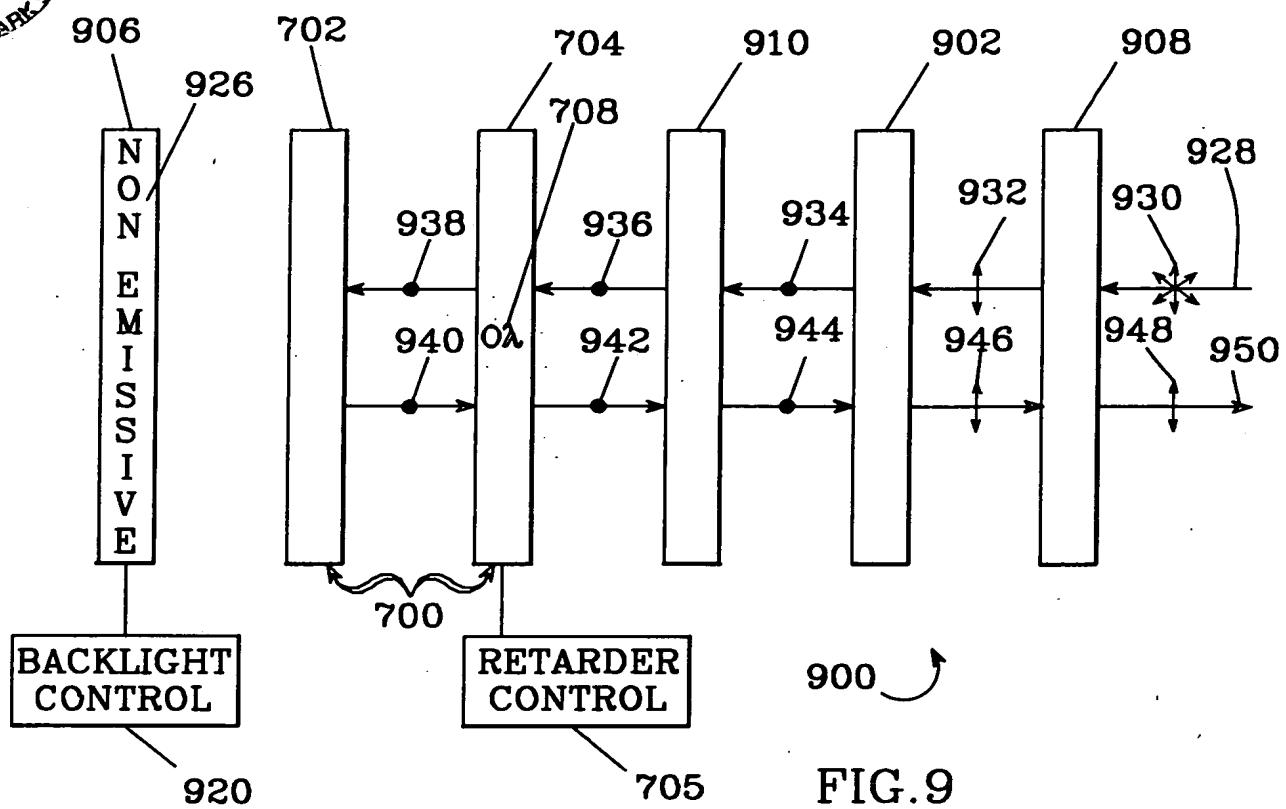


FIG.9

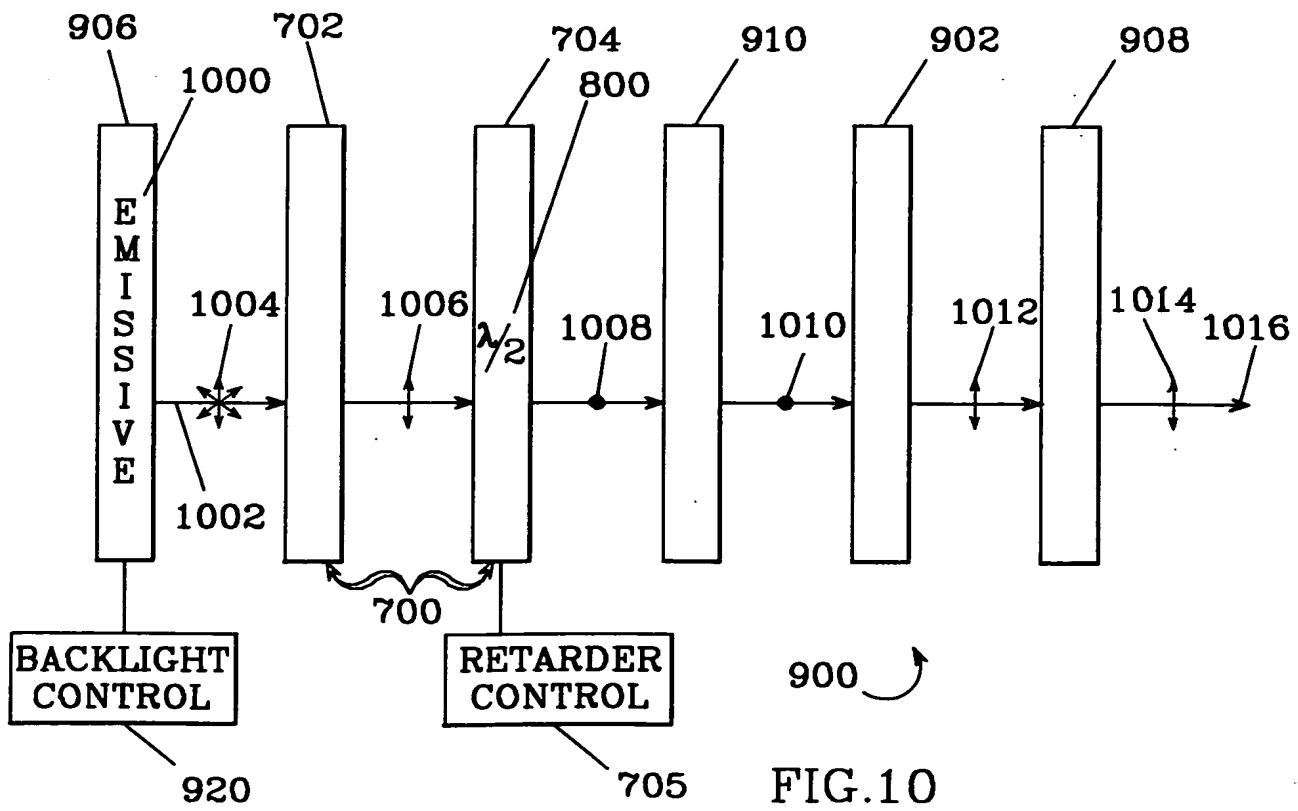
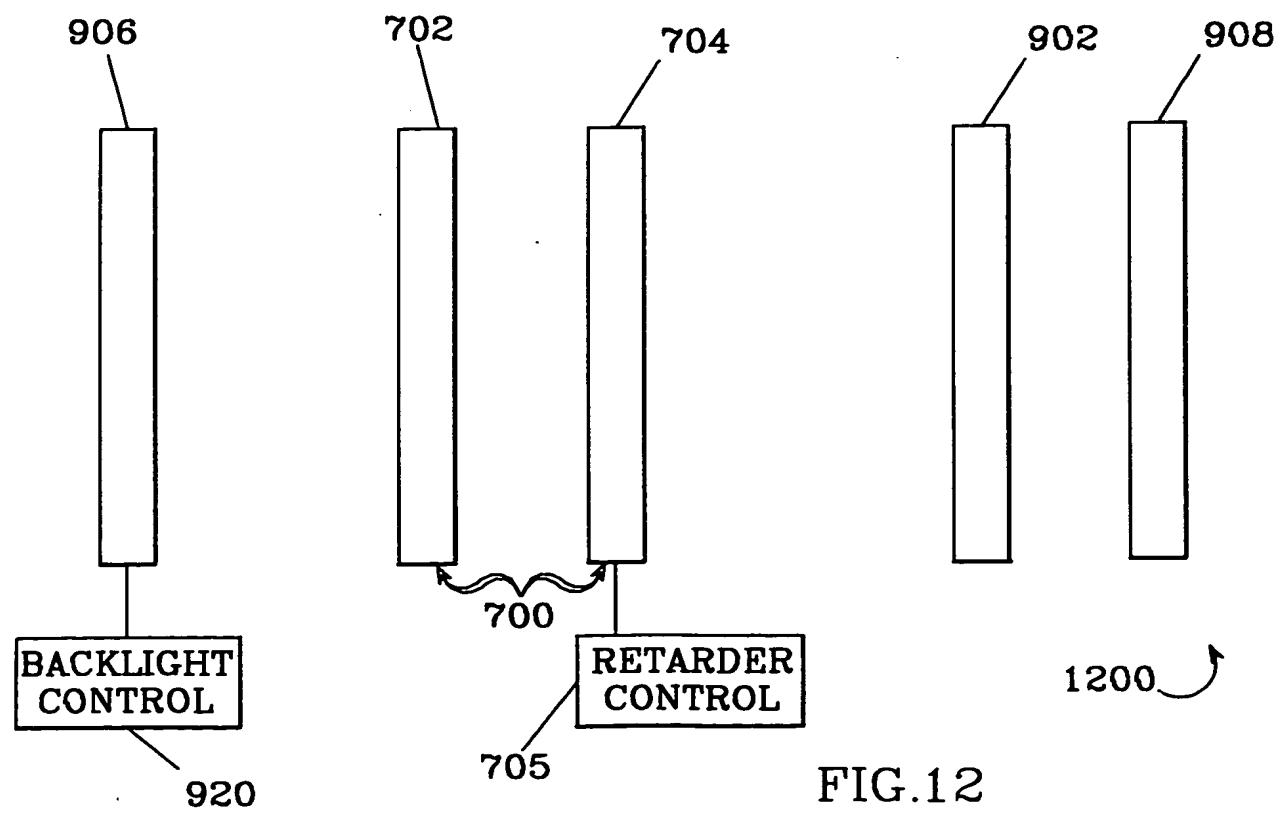
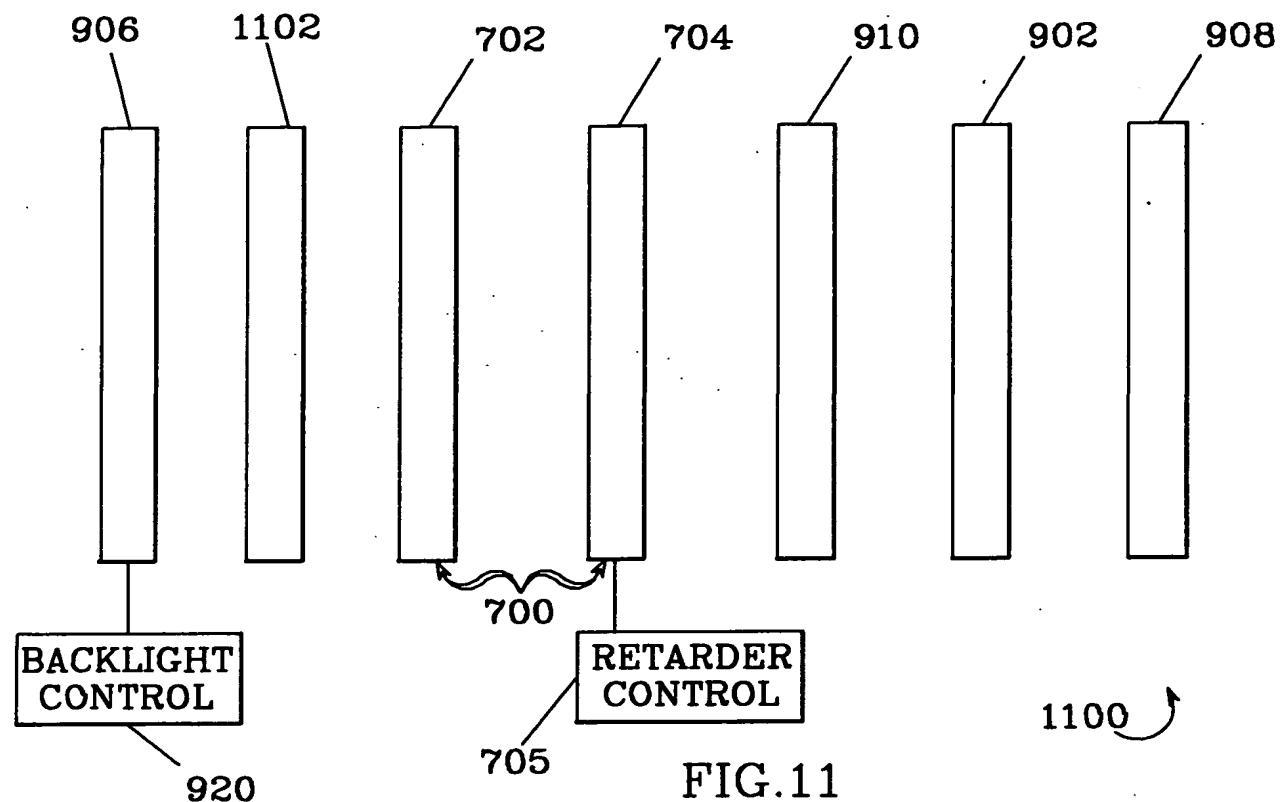


FIG.10



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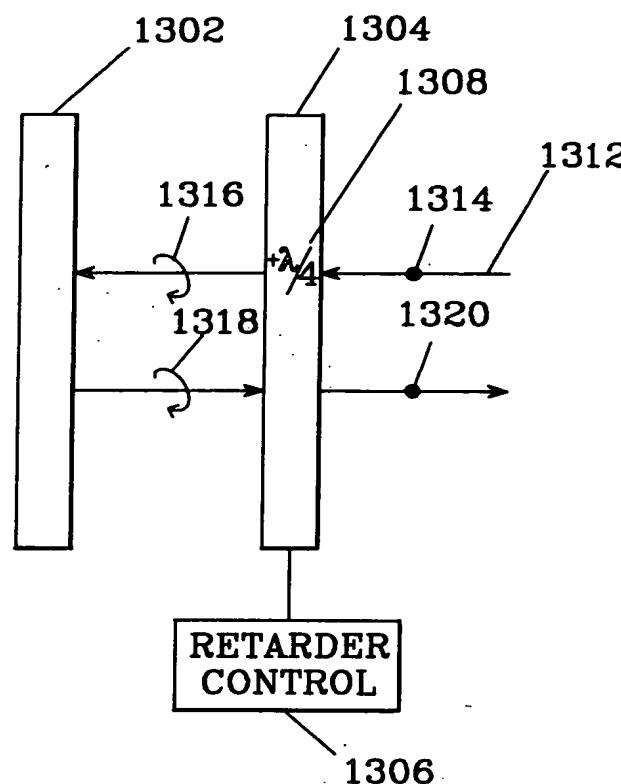


FIG.13

1300 ↗

1306

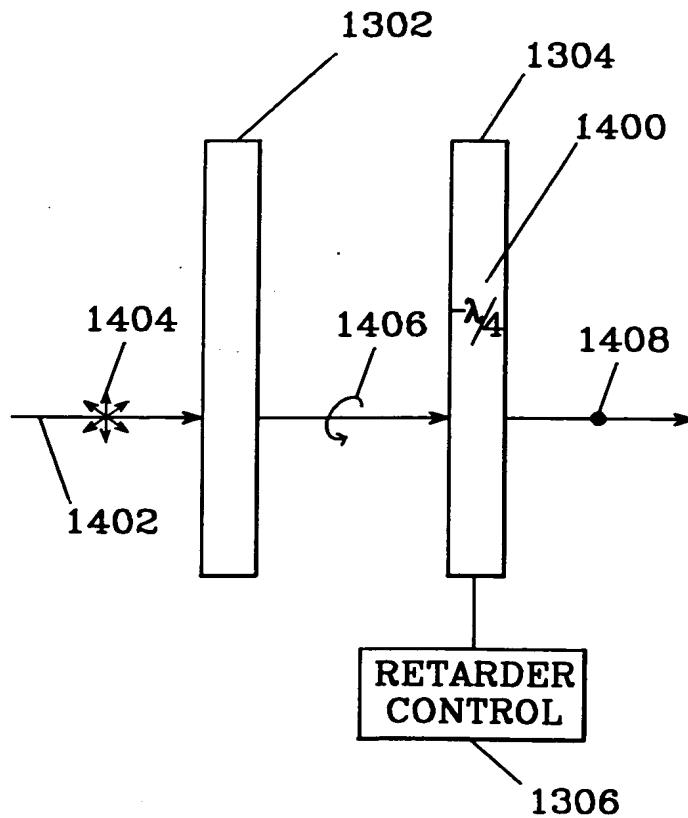


FIG.14

1300 ↗

1306

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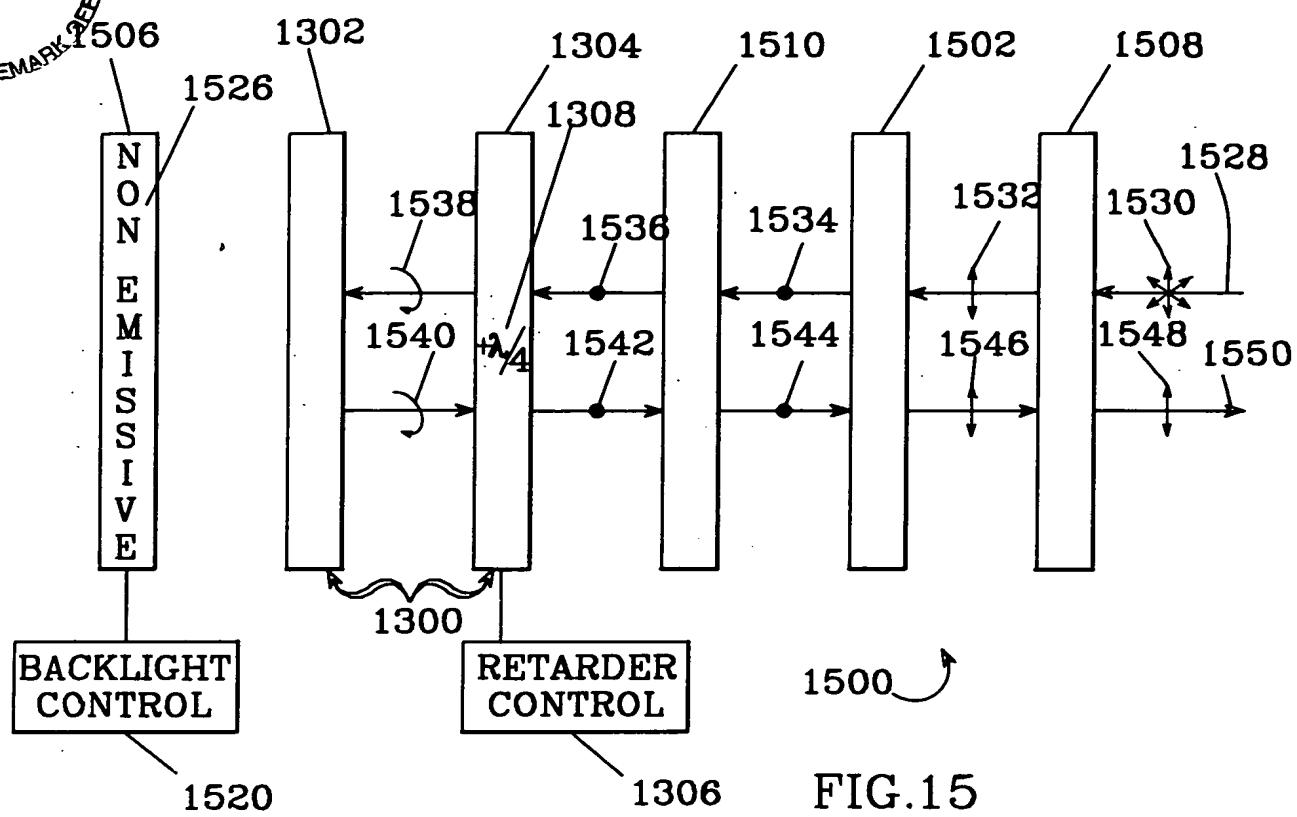


FIG. 15

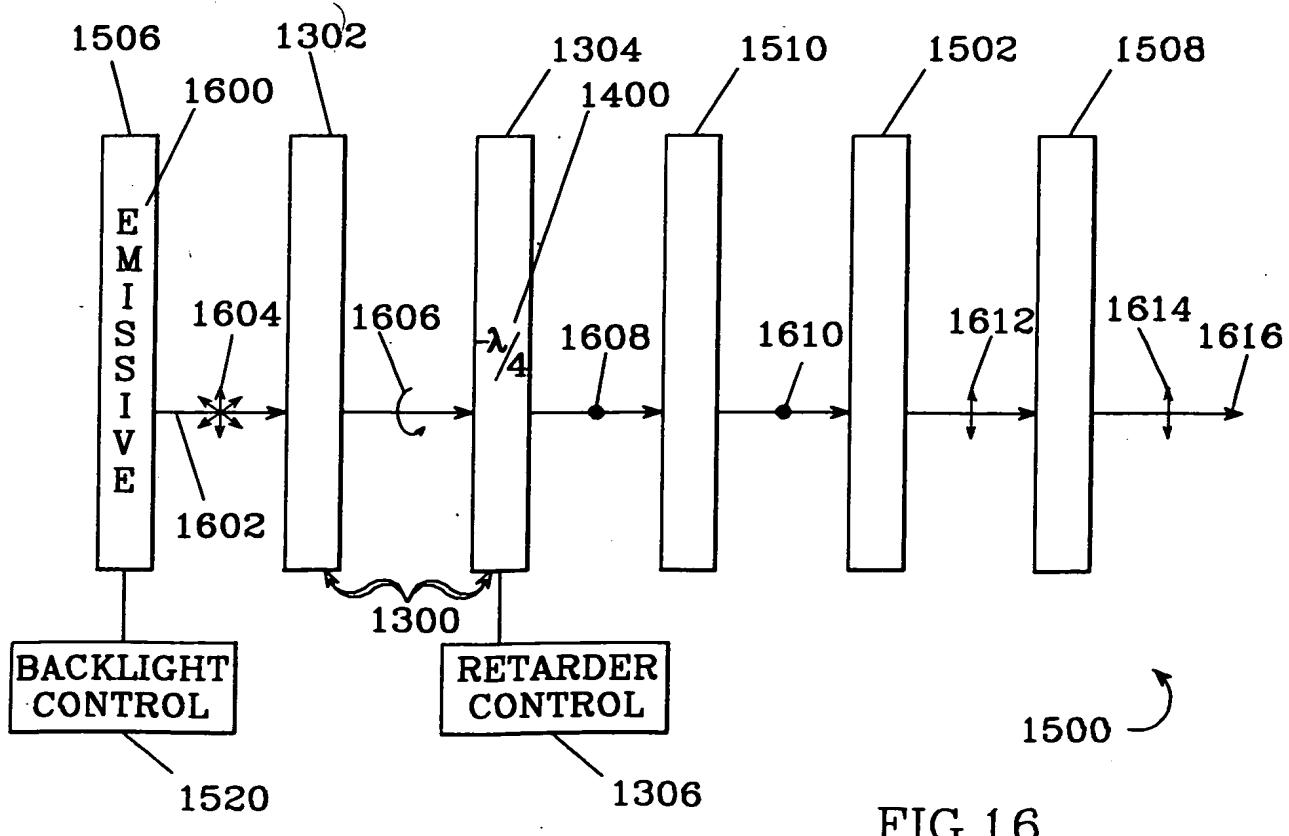


FIG. 16



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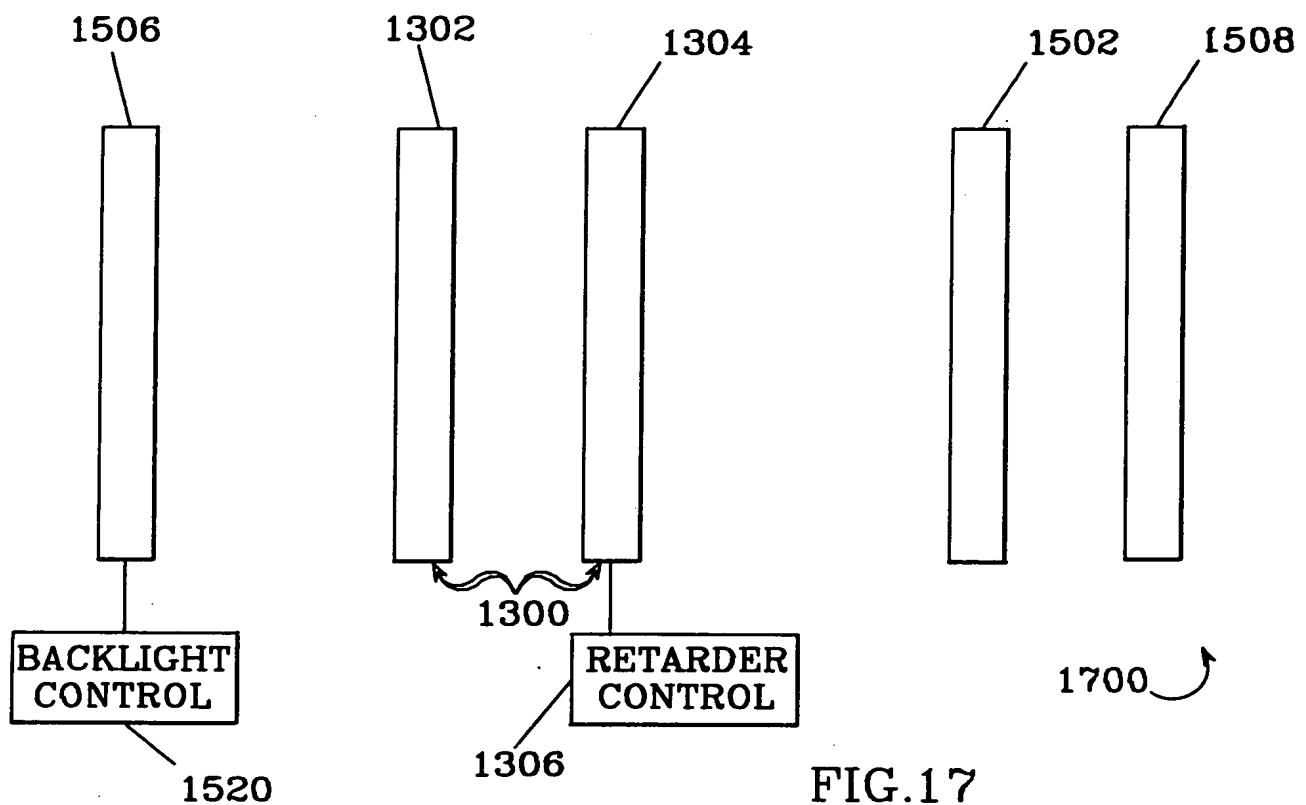


FIG.17



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FIG.18a

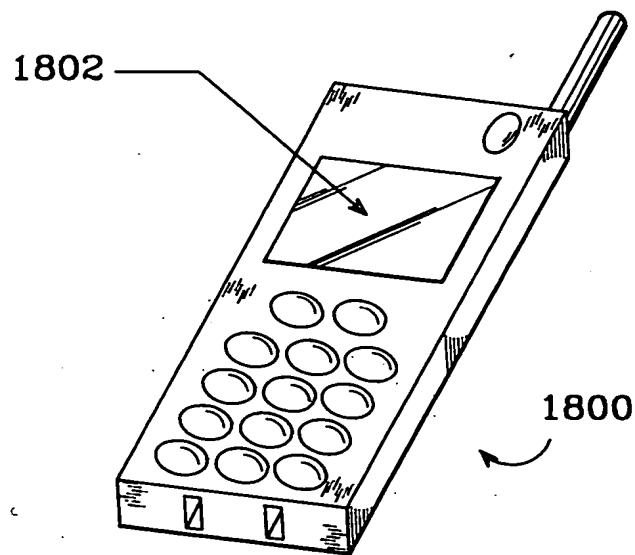


FIG.18b

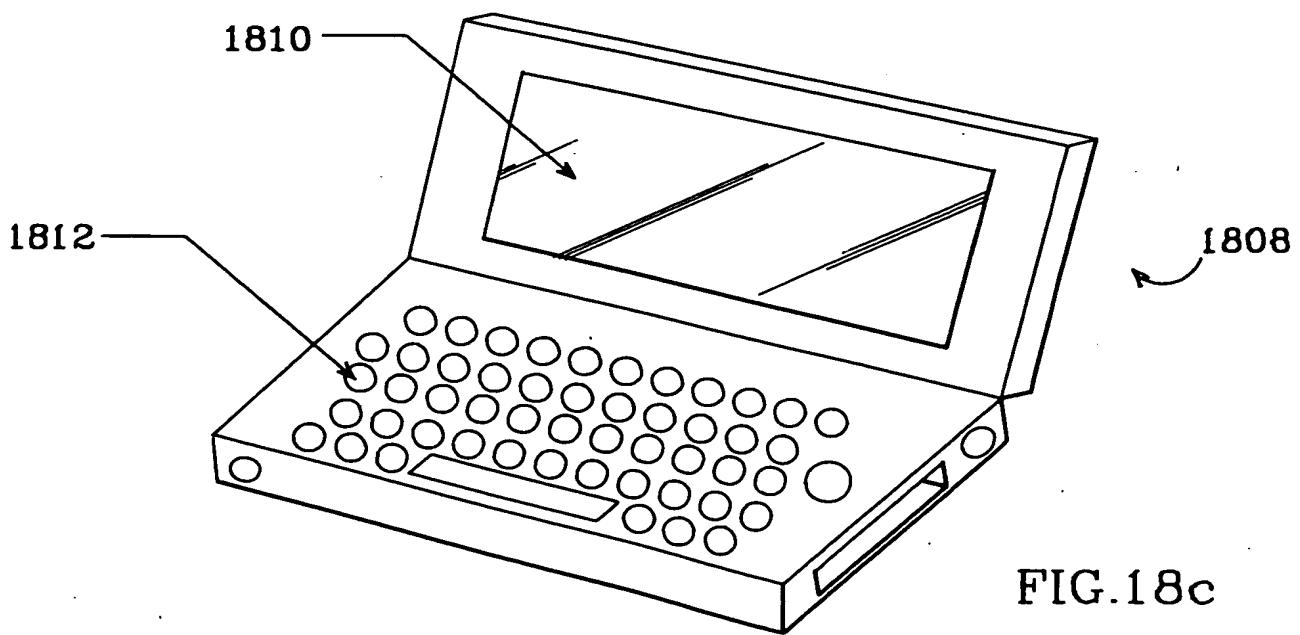
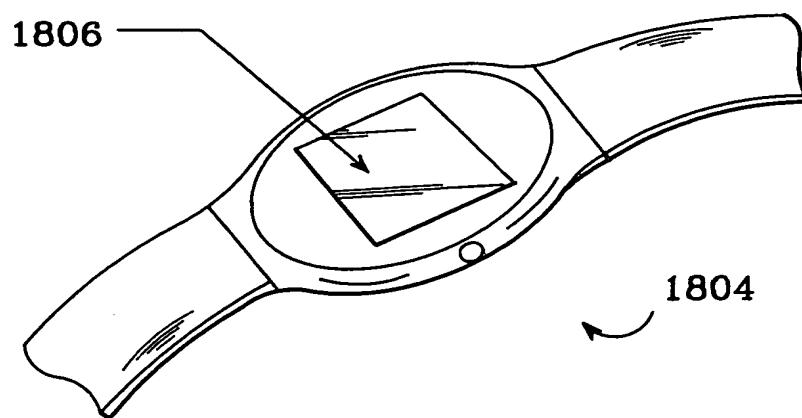


FIG.18c